**Mechanics: Work and Energy Note Guide Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Part I – Definitions:**

Work - Joule -

1.

2.

Kinetic Energy - Potential Energy -

Mechanical Energy (Conservation) - Power -

Watt -

**Part II – Understanding the Signs of Work:**

* Work done by forces that oppose the direction of motion are \_\_\_\_\_\_\_\_\_\_\_. An example of this would be \_\_\_\_\_\_\_\_\_\_\_\_\_.
* Work done by forces that are in the same direction of motion are \_\_\_\_\_\_\_\_\_\_. An example of this would be \_\_\_\_\_\_\_\_\_\_\_\_.
* If the applied force is perpendicular to the direction of motion, then the work done is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* If the net work is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then the kinetic energy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* If the net work is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then the kinetic energy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Part III – Vectors:**

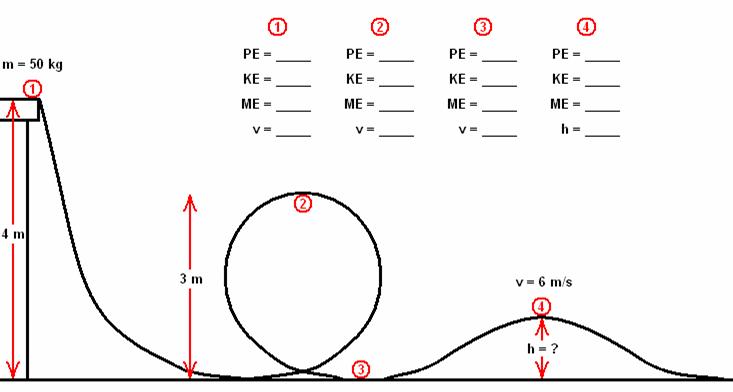
***W = Fdcosθ***

**cos(0) = \_\_\_\_\_\_\_\_ cos(180) = \_\_\_\_\_\_\_\_ cos(90) = \_\_\_\_\_\_\_\_**

**Part IV – Equations:**

|  |  |
| --- | --- |
| **Work** | 1. **2.** |
| **Kinetic Energy** |  |
| **Potential Energy**  **(due to gravity)** |  |
| **Mechanical Energy** |  |
| **Power** |  |

**Part V – Conservation of Energy:**

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